What is claimed is:

1. A double-row self-aligning roller bearing, which comprises an inner race, an outer race and left and right rows of rollers arranged between the inner race and the outer race, in which left and right bearing portions accommodating the left and right roller rows have respective load carrying capacities different from each other.

2. The double-row self-aligning roller bearing as claimed in Claim 1, wherein the rollers of the left row have at least one of the dimensions and shape that is different from that of the rollers of the right row.

3. The double-row self-aligning roller bearing as claimed in Claim 1, wherein the rollers of the left row have a length different from that of the rollers of the right row.

4. The double-row self-aligning roller bearing as claimed in Claim 1, wherein one of the left and right roller rows is comprised of axially hollowed rollers each having an axially extending hollow.

5. The double-row self-aligning roller bearing as claimed in Claim 1, wherein the left and right bearing portions have respective contact angles different from each other.

6. The double-row self-aligning roller bearing as claimed in Claim 1, wherein the rollers of the left and right rows have respective lengths different from each other and, at the same time, the left and right bearing portions have respective contact angles different from each other.

7. The double-row self-aligning roller bearing as claimed in Claim 1, wherein the outer race is divided into two axially juxtaposed split outer races.

8. The double-row self-aligning roller bearing as claimed in Claim 7, wherein a gap is provided between the two split outer races and a preload is applied to those split outer races.

9. The double-row self-aligning roller bearing as claimed in Claim 1, which is used as a main shaft support bearing for supporting a main shaft of a window power generator having a blade rotor mounted on such main shaft.

10. A main shaft support structure for a wind power generator, which comprises a main shaft having a blade rotor mounted thereon for rotation together therewith, and one or a plurality of bearings disposed inside a housing for supporting the main shaft, in which said one or plurality of the bearings are employed in the form of a double-row self-aligning roller bearing as defined in Claim 1 and include a first bearing portion arranged remote from the blade rotor and a second bearing portion arranged close to the blade rotor, and in which the first bearing portion has a load carrying capacity higher than that of the second bearing portion.

11. A double-row self-aligning roller bearing, which comprises an inner race, an outer race and double rows of rollers arranged between the inner race and the outer race,

the bearing being in its entirety divided into left and right split bearing portions each comprising a split inner race, a split outer race and a single row of rollers, in which elements associated with a load or a life are differentiated between the left and right split bearing portions.

12. The double-row self-aligning roller bearing as claimed in Claim 11, wherein one of the elements associated with the load or the life, which are to be differentiated between the left and right split bearing portions, is a material sued to form at least one of the split inner race, the split outer race and the rollers.

13. The double-row self-aligning roller bearing as claimed in Claim 11, wherein one of the elements associated with the load or the life, which are to be differentiated between the left and right split bearing portions, is a surface reforming treatment to be applied to a raceway surface of at least one of the split inner race and the split outer race or a rolling surface of the rollers.

14. The double-row self-aligning roller bearing as claimed in Claim 11, wherein one of the elements associated with the load or the life, which are to be differentiated between the left and right split bearing portions, is a surface roughness of a raceway surface of at least one of the split inner race and the split outer race or a rolling surface of the rollers.

15. The double-row self-aligning roller bearing as claimed in Claim 11, wherein the left and right split bearing portions, accommodating the left and right roller rows, are of the same size and the rollers of the left and right roller rows are also of the same size.

16. The double-row self-aligning roller bearing as claimed in Claim 11, wherein one of the elements associated with the load or the life, which are to be differentiated between the left and right split bearing portions, is an axial dimension of the split inner race, the split outer race and the rollers.

17. The double-row self-aligning roller bearing as claimed in Claim 11, in which a gap is provided between the two split outer races and a preload is applied to those split outer races.

18. The double-row self-aligning roller bearing as claimed in Claim 11, which is used as a main shaft support bearing for supporting a main shaft of a wind power generator having a blade rotor mounted on such main shaft for rotation together therewith.

19. A double-row self-aligning roller bearing assembly, which comprises two single-row self-aligning roller bearings juxtaposed axially relative to each other, and in which an element associated with a load or a life is differentiated between the two roller bearings.

20. The double-row self-aligning roller bearing assembly as claimed in Claim 19, which is used as a main shaft support bearing for supporting a main shaft of a wind power generator having a blade rotor mounted on such main shaft for rotation together therewith.

21. A main shaft support structure for a wind power generator, which comprises a main shaft having a blade rotor mounted thereon for rotation together therewith, and one or a plurality of bearings disposed inside a housing, in which said one or plurality of the bearings are employed in the form of a double-row self-aligning roller bearing as defined in Claim 11 and include a first split bearing portion arranged remote from the blade rotor and a second split bearing portion arranged close to the blade rotor, and in which the first split bearing portion has a load carrying capacity higher or rated life longer than that of the second split bearing portion.

22. The double-row self-aligning roller bearing as claimed in Claim 1, in which assuming that the length of the rollers of one of the roller rows is expressed by L1, the length of the rollers of the other of the roller rows is expressed by L2, and the length of a major axis of a contact ellipse generated in a plane of contact between the rollers of one of the roller rows and the inner race is expressed by A, the following dimensional relationship establishes:

$$L1 < L2 \text{ and } L1 > A$$

23. The double-row self-aligning roller bearing as claimed in Claim 22, in which the rollers are symmetrical rollers having a maximum diameter positioned at a location intermediate of the length of the rollers.

24. The double-row self-aligning roller bearing as claimed in Claim 22, in which the rollers are asymmetrical rollers having a maximum diameter positioned at a location displaced from a point intermediate of the length of the rollers.

25. The double-row self-aligning roller bearing as claimed in Claim 1, in which assuming that the radius of curvature of a ridge of the rollers of one of the roller rows is expressed by R1, the radius of curvature of a ridge of the rollers of the other of the roller rows is expressed by R2, the radius of curvature of the raceway surface of the inner race, with which the rollers of one of the roller rows contact, is expressed by N1, and the radius of curvature of the raceway surface of

the inner race, with which the rollers of the other of the roller rows contact, is expressed by N2, the following dimensional relationship establishes:

$$N1/R1 < N2/R2$$

26. The double-row self-aligning roller bearing as claimed in Claim 25, in which the radius of curvature R1 is greater than the radius of curvature R2.

27. The double-row self-aligning roller bearing as claimed in Claim 25, in which the radius of curvature N1 is smaller than the radius of curvature N2.

28. The double-row self-aligning roller bearing as claimed in Claim 25, in which one of the rows of the rollers having the radius of curvature R1 have a length smaller than that of the other of the rows of the rollers having the radius of curvature R2.